

Calculation of Predicted Hit and Predicted No-Hit Reliabilities Dependence on Hit-NoHit Distributions

Fraction Hit (%Hit)	Fraction No-Hit (%No-Hit)	False Negative (FN)	False Positive (FP)	Predicted	Predicted	Overall Reliability (OR)
				Hit Reliability (PH)	No-Hit Reliability (PNH)	
0.1	0.9	0.2	0.2	0.308	0.973	0.800
0.2	0.8	0.2	0.2	0.500	0.941	0.800
0.3	0.7	0.2	0.2	0.632	0.903	0.800
0.4	0.6	0.2	0.2	0.727	0.857	0.800
0.5	0.5	0.2	0.2	0.800	0.800	0.800
0.6	0.4	0.2	0.2	0.857	0.727	0.800
0.7	0.3	0.2	0.2	0.903	0.632	0.800
0.8	0.2	0.2	0.2	0.941	0.500	0.800
0.9	0.1	0.2	0.2	0.973	0.308	0.800
0.1	0.9	0.2	0.35	0.203	0.967	0.665
0.2	0.8	0.2	0.35	0.364	0.929	0.680
0.22	0.78	0.2	0.35	0.392	0.920	0.683 Approx. high screen
0.3	0.7	0.2	0.35	0.495	0.883	0.695
0.4	0.6	0.2	0.35	0.604	0.830	0.710
0.5	0.5	0.2	0.35	0.696	0.765	0.725
0.6	0.4	0.2	0.35	0.774	0.684	0.740
0.7	0.3	0.2	0.35	0.842	0.582	0.755
0.8	0.2	0.2	0.35	0.901	0.448	0.770
0.9	0.1	0.2	0.35	0.954	0.265	0.785
0.1	0.9	0.1	0.1	0.500	0.988	0.900
0.2	0.8	0.1	0.1	0.692	0.973	0.900
0.3	0.7	0.1	0.1	0.794	0.955	0.900
0.4	0.6	0.1	0.1	0.857	0.931	0.900
0.5	0.5	0.1	0.1	0.900	0.900	0.900
0.6	0.4	0.1	0.1	0.931	0.857	0.900
0.7	0.3	0.1	0.1	0.955	0.794	0.900
0.8	0.2	0.1	0.1	0.973	0.692	0.900
0.9	0.1	0.1	0.1	0.988	0.500	0.900

Predicted Hit Reliability = correctly predicted hits / (correctly predicted hits + incorrectly predicted hits)

$$PH = (1 - FN)(%H) / [(1 - FN)(%H) + FP(%NH)]$$

Predicted No-Hit Reliability = correctly predicted no-hits / (correctly predicted no-hits + incorrectly predicted no-hits)

$$PNH = (1 - FP)(%NH) / [(1 - FP)(%NH) + FN(%H)]$$

Overall Reliability = (correctly predicted hits + correctly predicted no-hits) / (total hits + total no-hits)

$$OR = [(1 - FN)(%H) + (1 - FP)(%NH)] / [(1 - FN)(%H) + (1 - FP)(%NH) + FP(%NH) + FN(%H)]$$